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Forage News

Keeping Forage-Livestock Producers in Kentucky Informed
Dr. Ray Smith and Krista Lea, editors

April 2020

Strategies for Reclaiming Hay Feeding Areas

Wet conditions this winter have resulted in almost complete disturbance in and around hay feeding areas. Even well designed hay feeding pads will have significant damage surrounding the pad where animals enter and leave. These highly disturbed areas create perfect growing conditions for summer annual weeds like spiny pigweed and cockle bur. Their growth is stimulated by lack of competition from a healthy and vigorous sod and the high fertility from the concentrated area of dung, urine and rotting hay.

Regardless of the reclamation strategy that is employed, it is always important to create an environment that will allow seed to germinate quickly and uniformly, and achieve rapid canopy closure. The best defense against summer annual weeds is covering the soil with a desirable forage species. This inhibits weeds from germinating and allows the desirable forage to actively compete with weeds that have germinated. Creating this environment starts with making sure that soil fertility and pH are adequate and preparing a fine, but firm seedbed.

Soil test and adjusting fertility. Damaged areas should be soil tested and lime and fertilizer applied as needed. In most cases, fertility will be high in hay feeding areas due to high concentrations of dung, urine, and rotting hay. However, a quick soil test will allow you to confirm this and tell you if lime is needed.

Reseeding damaged sods. In most cases, hay feeding areas will need complete renovation. After hay feeding is completed and cattle have been moved onto pastures, reclaiming these areas can begin. In most cases, these areas will need to be harrowed to smooth and level. The goal should be to produce a fine, but firm seedbed that will enhance soil to seed contact. Good soil to seed contact is essential for rapid germination and uniform emergence of the seeded forage crop. A general rule is that if you walk across a prepared seedbed and sink in past the sole of your shoe, it needs to be re-firmed by cultipacking or waiting for a rain to settle it.

You may want to plant tall fescue into these areas, but April is getting late for fescue establishment. Some producers use annual ryegrass or spring oats for a quick cover, short term stand, but they should be planted immediately. Many producers are choosing to wait until after frost for planting and using a warm season annual such as sudangrass, crabgrass or other species. When a summer annual is used, you can then spray out this stand in late summer and plant the desired long term perennial cool season species like tall fescue with great success in early September. See the Forage Species

Section of the UK Forage Website for more detailed establishment and management practices for all the summer annual forages adapted to Kentucky.

For the full article including strategies for using all the warm and cool season grass species, see the March edition of Cow Country News. ~ Dr. Chris Teutsch, excerpt from Cow Country News

Warm Season Annuals: Love Them or Hate Them

In the more humid regions, there's no question that the use of forage sorghum, sorghum-sudangrass, sudangrass, and pearl millet has become more popular as a warm-season annual forage resource.

Last year, with a lot of unplanted or late-planted acres, more than the usual amount of sorghum species were planted and harvested. It was also a year where sorghums didn't perform up to expectations in many cases because of persistent cool, wet weather conditions.

In the same way that our cool-season annual and perennial forages don't perform to peak levels under dry, hot conditions, warm-season sorghums are not well adapted to cool temperatures. However, they can offer exceptional performance and forage yields under normal summer conditions. This variation in performance has left our world full of sorghum lovers and haters and opinions ranging from undependable to forage savior.

Jeff Jackson is the national forage sorghum product manager for Croplan by Winfield United. When selecting seed genetics and feeding for dairy or beef performance, Jackson recommends that growers look to the more highly digestible brown midrib (BMR) options. "It may cost a little more, but you'll easily make that up with more milk or animal gain, palatability, and less feed waste.

"You can't rush the planting date," Jackson said. "You need consistent soil temperatures above 60°F at 8 a.m.

Forage Timely Tips: April

- ✓ As pasture growth begins, rotate through pastures quickly to keep up with the fast growth of spring.
- ✓ Creep-graze calves and lambs, allowing them access to highest-quality pasture.
- ✓ Finish re-seeding winter feeding sites where soil disturbance and sod damage occurred.
- ✓ As pasture growth exceeds the needs of the livestock, remove some fields from the rotation and allow growth to accumulate for hay or haylage.
- ✓ Determine need for warm season forages.
- ✓ Flash graze pastures newly seeded with clovers to manage competition.

before you should think about planting. If you don't heed this rule, germination and seedling vigor will be compromised. Patience is a virtue with sorghum planting. If planting pearl millet, hold off until morning soil temperatures are 65°F or above," he added. These temperatures are well after the last frost.

Jackson explained that the recommended seeding rates have changed as new genetics have entered the market. "Genetics have improved for fiber digestibility, which allows us to plant less seed per acre while improving standability and producing excellent yields." Sorghum-sudangrass hybrids can be successfully established at a seeding rate of 15-25 lbs/A. "The optimum rate will vary with local rainfall patterns, soil types, and planting methods." (Note: in Kentucky we still recommend 20 to 25 lbs/A when drilling and 25-30 lbs/A when broadcasting.)

"It's a myth to think that you shouldn't fertilize to avoid high nitrates," Jackson said. "Proper fertility is actually needed to reduce nitrate potential. I tell growers to apply nitrogen and sulfur at a 5-to-1 ratio, having 1 to 1.2 pounds of nitrogen per day of growth is the standard." And summer annuals are like alfalfa and remove high amount of potash. Make sure to soil test to determine proper fertilizer rates.

If using a multi-cut crop such as sorghum-sudangrass, Jackson recommends split-applying nitrogen; this helps to prevent luxury consumption of nitrogen and high nitrates in first cutting. Forage sorghum, sorghum-sudangrass, or sudangrass are receiving more interest and use than ever before in the humid regions of the U.S. They offer a lot of value in both grazing and conventional-harvest systems. ~ Mike Rankin, excerpt from Hay and Forage Grower.

Low Supplies of Summer Annual Grass Seed

Several seed company reps have predicted that there may be low supplies of summer annual grass seed this summer. Although it's always important to purchase seed well before your planting date, it will be all the more important this year. For specific information on the best varieties of summer annuals to plant go to the Variety Trials tab on the UK Forage Website and click on the 2019 Annual Grass Report. The end of this publication contains summary tables for how varieties have performed over the last 12 years. We've included the summary table for Sudangrass on the last page of this publication. ~ Dr. Ray Smith

Forage Economy in Tough Times

When it seems like times can't get any tougher in agriculture, they do. Who could have imagined that a virus outbreak on the other side of the world could in fact shut down the global economy? As I write this, cattle prices are experiencing unusual lows in spite of the fact that people are almost fighting for hamburger in stores, if it is available at all.

On the positive side, grass has begun to grow in earnest. We have had a few dry (or drier) days that get us closer to being able to be in the field. Given the undoubtedly abysmal state of cash flow on farms, what are the proper ways to economize on forages? Here are a few thoughts.

A soil test is still the best place to spend a dollar. We need to be assured that we are

applying needed nutrients in the right places. If you have to limit the number of fields you fertilize, top dress your most productive fields first. You can define 'productive' both as the forage type (high yielding) or soil type (deeper, well drained). You will get more bang for the fertilizer dollar.

As hard as it is to do, this may be the time to consider buying some stockers on the down market and put them on grass. Remember that these young, growing animals will be the most responsive to your better forage. You will be putting your best forage into an animal that will give you a quicker paycheck. And unlike cows, where 80% of the forage goes to maintenance, 100% of the forage will be used to produce a saleable product.

If you are seeding this spring, calibrate the drill. Poorly adjusted drills are one of the biggest reasons for failed seedings. Seeding too deep is usually the main reason. However, uncalibrated drills can easily put out 30% too much seed. Dr. Chris Teutsch has an excellent video on drill calibration on the UKY Forages YouTube channel at the following link (<https://www.youtube.com/watch?v=TLv6SmqYIU>). Or just Google UKY grain drill calibration.

One of the best ways to get more from your pasture system is to upgrade your grazing management. It has never been more cost effective to subdivide pastures and to add temporary watering points. Both will improve the proportion of forage produced into product sold.

Another way to translate forage more directly into saleable product is to implement creep grazing. Creep grazing uses a narrow gate or a slightly raised fence wire that allows calves access to higher quality pastures. These pounds of forage are more efficiently converted to saleable product when consumed by calves vs cows. Limited resources of fertilizer and seed can be focused on these smaller creep pastures rather than whole farm.

Thinking long term, remember that the largest cost in maintaining a cow herd is the cost of winter feeding. Make plans now to make enough hay and better hay. Think you might cut earlier than last year, since stage of maturity is the single biggest factor in forage quality.

And a final thought – I don't know anyone that has not had a renewed sense of appreciation for the American Farmer and their ability to keep food coming to a very apprehensive public. I know I speak for all of the UK College of Agriculture, Food and the Environment when I say we are proud to help you do what you do.

~ Jimmy Henning, excerpt from Farmers Pride

Upcoming Events (see website for details) **Events in Red are canceled due to COVID-19**

APR 14 - Fencing School, Glasgow, KY

APR 16 - Fencing School, Grand Rivers, KY

APR 21-22 - KY Grazing School, Princeton, KY

APR 28-30 - So. Pasture Forage Crop Imp. Conf., Montgomery, AL - Postponed until 2021

MAY 19 - Small Ruminant Fencing School, Frankfort, KY

MAY 21 - Fencing School, Campton, KY

SUMMER Forage Tours—TBA in the May issue

SEPT 8-9—KY Grazing School, Versailles, KY

OCT—KY Grazing Conferences, Winchester, Elizabethtown and Western KY

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see blue.

Find Success with Baleage

Hay harvesting is around the corner and with that comes the question of what is the most cost effective and efficient storage option. Baleage involves additional costs, but producers across the country see the added benefits compared to harvesting dry hay. Just like any storage method, baleage requires a well-thought out plan to achieve the desired results.

Dave Hartman, Penn State University Extension livestock specialist, explains that plastic wrapping bales for forage comes with many benefits. “The advantages are clear — reduction in drying time, better leaf retention compared to dry hay, no storage structures needed, and lower weather risk,” Hartman notes. Storing baleage also comes with some added costs. The PA Custom Rate Report shows that bale wrapping costs between \$7 to \$8 per bale. This includes the plastic wrap, equipment, and plastic disposal.

Producers often have their own preference of optimum bale moisture. Hartman explains that research shows the ideal moisture level should be between 45% and 60%. He notes that this moisture level creates the most favorable conditions to promote fermentation. Studies show that bales with too little moisture have inadequate fermentation, but bales with high levels of moisture are prone to clostridial fermentation. This latter fermentation results in high levels of butyric acid and ammonia, which are dangerous to livestock. Hartman explains that as much air as possible needs to be eliminated from inside the bale to achieve high-quality baleage. The first step is a dense bale. Next, ensure enough plastic wrap is used to stop airflow. University of Wisconsin research studied internal bale temperatures of bales with different thicknesses of plastic wrap and found that bales should be wrapped with a minimum of 6 mils of total plastic.

Another University of Wisconsin study showed that bales need to be wrapped within 24 hours after baling. Other studies conclude that the critical point for wrapping is closer to 12 hours. Hartman suggests wrapping the bale as soon as possible, preferably within that 12-hour window. ~ Michaela King, excerpt from Hay and Forage Grower, Go to HayandForage.com for the full article and many others.

Featured Forage Publication: Crabgrass AGR-232

Crabgrass possesses significant potential for supplying high quality summer forage although it is considered a weed by many. A primary advantage of crabgrass is that it is well adapted to Kentucky and occurs naturally in most summer pastures, especially those that have been overgrazed. It is also highly palatable and a prolific re-seeder. Planting an improved variety of crabgrass is recommended because the production of naturally-occurring ecotypes varies greatly. Crabgrass is best utilized by grazing. Remember that the advantage of crabgrass as a natural reseeding annual can also be a disadvantage. Don't plant crabgrass anywhere that you may not want it in the future. It can be a weed! Go to the Forage Website and click on the Forage Species tab for this publication.

Table 42. Summary of Kentucky sudangrass yield trials 2008-2019 (yield shown as a percentage of the mean of the commercial varieties in the trial)

Variety	Proprietor/ KY Distributor	Lexington												Princeton			Mean ³ (#trials)
		2008 ^{1,2}	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2017	2018	2019	
		All trials are 1 year yields															
AS9301 BMR ⁴	Advanta Seeds/Ramer Seed					118											—
AS9302 BMR (Brachytic Dwarf)	Advanta Seeds/Ramer Seed										124	104	102	119	117	115	114(6)
Enorma BMR	Cal/West Seeds			99	94	92	91	83	91	98							93(7)
FSG 1000 BMR	Farm Science Genetics								101	124	110						112(3)
Hayking BMR	Central Farm Supply	111	112	91	97	97	96	92	94	90	80	109		99			97(12)
Monarch V	Public	104	96	102	97	93	98	110	99	82							98(9)
Piper	Public	90	91	97	94	104	105	89	94	85	81	86	93	86	99	88	92(15)
ProMax BMR	Ampac Seed	95	101	110	115	96	103	100	111	111	106	102	101	96	84	87	101(15)
SS130 BMR	Cal/West Seeds			101	103		107	106	110	109	99		93			97	103(9)
Trudan Headless	S & W Seed Company							118					112			113	114(3)

¹ Establishment year.

² Use this summary table as a guide in making variety decisions, but refer to specific tables in this report to determine statistical differences in forage yield between varieties.

³ Mean only presented when respective variety was included in two or more trials.

⁴ BMR (brown midrib) means that a variety has been developed to produce lower amounts of lignin, which usually translates into higher quality.

Quote of the Month: Good Variety Decisions Don't Guarantee Success, But Bad Ones Can Guarantee Failure

Plant breeding is a relatively young science, but it has resulted in amazing increases in productivity. In the case of forage crops, many traits have been improved including forage yield, forage quality, disease resistance, insect resistance, timing of forage growth and tolerance to adverse weather conditions. Obtaining and using such information can greatly increase the likelihood of success in both establishment and production. Excerpt from Forage Quotes and Concepts Volume I by Ball, Lacefield, Allen, Hoveland and Bouton.

Corn Silage Variety Report Now Available

Check out the most recent report of the best corn silage varieties for KY. Linked on the Forage Website under Variety Trials or download directly at: <http://www2.ca.uky.edu/agcomm/pubs/PR/PR776/PR776.pdf>